## REMARKS

After entry of the instant Amendment, claims 4, 5, and 8-25 are pending in the application. Claims 13-17 and 19-23 stand withdrawn as non-elected claims that were subject to a restriction requirement. Claims 4 and 5 are currently amended. Claims 1-3, 6, and 7 were previously cancelled.

To explain the amendments to the claims, independent claims 4 and 5 have been amended to further specify that the content of silanol groups and silicon-bonded alkoxy groups is not more than 2 mol% relative to all the silicon-bonded substituent groups, support for which can at least be found in paragraph [0025] of the original application as filed. The Applicants respectfully submit that no new matter is added through the instant amendments to the claims.

With regard to the withdrawn claims 13-17 and 19-23, the Applicants respectfully maintain that, because claims 13-17 and 19-23 are process claims which require all the elements of the previously-elected product claims (i.e., claims 4, 5, 8-12 and 18), the Applicants are entitled to rejoinder of these claims upon allowance of the product claims.

Claims 4, 5, 8-12, 18, 24, and 25 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention due to the use of the phrase "per molecule" recited in claims 4 and 5. Claims 4, 5, 8-12, 18, 24, and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Birdsall et al. (USPN 4198131) in view of Amano et al. (USPN 5672672). As set forth in further detail below, the Applicants

respectfully traverse the rejections of the claims under 35 U.S.C. §112, and the Applicants respectfully submit that the amendments to independent claims 4 and 5 serve to overcome the rejections of these claims under 35 USC §103(a) over Birdsall et al. in view of Amano et al. such that these rejections must be withdrawn.

**As to the Rejections of Claims 4, 5, 8-12, 18, 24, and 25 Under 35 U.S.C. §112, Second Paragraph**

The Applicants respectfully traverse these rejections on the basis that the existing claim language is adequately clear as to the meaning of the phrase "per molecule". More specifically, claims 4 and 5 are directed to an optical waveguide comprising **a hydrosilation-cured product of components (A) and (B) (and, for claim 5, component (d2))**. On this basis alone, the Applicants respectfully submit that any claim elements recited under the tabulations for components (A), (B), or (d2) in the claims are clearly directed to those components prior to reaction. After all, there would be no reason to recite the phrase "hydrosilation-cured product of" if components (A), (B), and (d2) could be elements other than reactants that are reacted to form the hydrosilation-cured product. Furthermore, those of skill in the art readily appreciate that a hydrosilation reaction involves a reaction between unsaturated groups in one component and silicon-bonded hydrogen atoms in another components. As such, the Applicants respectfully submit that it is adequately clear to those of skill in the art that component (A) contains unsaturated groups that are reacted with silicon-bonded hydrogen atoms of component (B) to form the claimed hydrosilation-cured product, and that the "molecule" referred to throughout the claims is the

respective reactant (i.e., component (A), (B), or (d2)) that is reacted to form the hydrosilation-cured product, and is not the hydrosilation-cured product itself.

In view of the foregoing, the Applicants respectfully submit that the rejections of the claims under 35 U.S.C. §112, second paragraph, are overcome and must be withdrawn.

**As to the Rejections of Claims 4, 5, 8-12, 18, 24, and 25 Under 35 U.S.C. §103(a) Over Birdsall et al. in View of Amano et al.**

Despite the amendments to independent claims 4 and 5, the Applicants are unwilling to concede that the Examiner has properly established a *prima facie* case of obviousness of independent claims 4 and 5, prior to the instant amendments, over Birdsall et al. in view of Amano et al. Nevertheless, the Applicants have chosen to amend the instant independent claims 4 and 5 in a manner that more clearly distinguishes the instantly claimed hydrosilation-cured product in claims 4 and 5 from the compositions of Birdsall et al. such that the rejections over Birdsall et al. in view of Amano et al. are overcome. In particular, the Applicants respectfully submit that, even assuming proper combination of the teachings of Birdsall et al. and Amano et al., each and every feature of independent claims 4 and 5 cannot be accounted for in Birdsall et al. and Amano et al. such that a *prima facie* case of obviousness cannot be established based upon the combination of these references.

The Applicants have previously documented the relevant standards to support the fact that each and every element in a claim must be accounted for to properly reject the claim under 35 U.S.C. §103(a), and the Applicants do not repeat such standards herein. Given the fact that each and every element in independent claims 4 and 5 must be accounted

for to properly reject these claims under 35 USC §103(a) over Birdsall et al. and Amano et al., the Applicants respectfully submit that this burden cannot be met by the Examiner because these references fail to teach at least component (A) having a content of silanol groups and silicon-bonded alkoxy groups of not more than 2 mol% relative to all the silicon-bonded substituent groups thereof.

The Applicants note that the low content of silanol groups and silicon-bonded alkoxy groups of not more than 2 mol% relative to all the silicon-bonded substituent groups of component (A) are features that provide beneficial physical properties to the curable compositions, especially for purposes of optical waveguides. To explain, the low content of silanol groups and silicon-bonded alkoxy groups in component (A) provides increased heat resistance (see paragraph [0025] of the original application as filed).

Relative to the teachings of Birdsall et al. and Amano et al., the Examiner has relied solely upon Birdsall et al. to find the reactants used to make the hydrosilation-cured reaction product in claims 4 and 5. While Birdsall et al. does teach a hydrosilation-curable composition, Birdsall et al. fails to teach the low content of silanol groups and silicon-bonded alkoxy groups of not more than 2 mol% relative to all the silicon-bonded substituent groups of the siloxane compositions (which are otherwise comparable to component (A) of the instant claims). In fact, Birdsall et al. recognizes the presence of silanol groups in the siloxane compositions described therein (see column 3, lines 21-26). As made clear in paragraph [0025] of the instant application, discrete steps must be taken to reduce the content of silanol groups in component (A) that is reacted to produce the instantly claimed

hydrosilation-cured products, and no such steps are described in Birdsall et al. As such, the siloxane compositions of Birdsall et al. must necessarily include more silanol groups than are contained in the instant claimed component (A).

In addition to the fact that the combined teachings of Birdsall et al. and Amano et al. fail to teach each element of independent claims 4 and 5 as amended, the Applicants further submit that the Examiner cannot establish obviousness of independent claims 4 and 5 based upon the combined teachings of Birdsall et al. and Amano et al., either alone or in combination with other references. As set forth in the Office Action, the Examiner has used Amano et al. primarily as a general reference to show that it was known to use polysiloxane compositions in the field of waveguides by altering their refractive indexes for core-clad arrangement, with reliance on Birdsall et al. for teachings of the specific composition claimed in independent claims 4 and 5. At least with regard to the low content of silanol groups and silicon-bonded alkoxy groups of not more than 2 mol% relative to all the silicon-bonded substituent groups of component (A), the Applicants respectfully submit that this element of the instant claims is particularly illustrative of a feature that would **not** be sought by one of skill in the art with knowledge of the composition of Birdsall et al., which is described as being useful for hard contact lenses. Rather, because the low content of silanol groups and silicon-bonded alkoxy groups has particular benefits in terms of heat resistance of the resulting cured product, this is not a property of the compositions of Birdsall et al. that would be viewed as particularly relevant to the application of hard contact lenses. As such, the Applicants respectfully submit that there is no basis within Birdsall et al., or in the art in

general, to modify the teachings of Birdsall et al. to find a teaching of a low content of silanol groups and silicon-bonded alkoxy groups of not more than 2 mol% relative to all the silicon-bonded substituent groups of component (A), or the attendant steps that are mentioned in the instant specification for achieving the low content of silanol groups and silicon-bonded alkoxy groups.

Further, the Applicants are unwilling to concede that the general teachings of Amano et al. provided sufficient guidance to one of skill in the art, **at the time of the instant invention**, that the compositions of Birdsall et al. could be successfully modified to make optical waveguides that satisfy the requirements of Amano et al. This is particularly true given uncertainty that one of skill in the art would have had at the time of the instant invention with regard to whether the compositions of Birdsall et al. would possess sufficient resistance to intermixing so as to acceptably make the waveguides. After all, without any guidance whatsoever in Birdsall et al. that the compositions taught therein have sufficient resistance to intermixing, one of skill in the art would have had no more of a reason to choose the compositions of Birdsall et al. for the purpose of making waveguides than to choose from any of the countless known polysiloxane compositions that are known for optical applications.

The Examiner has provided no significant reasoning to explain why one of skill in the art would be directed to use the compositions of Birdsall et al. for the optical waveguides as taught by Amano et al. other than to focus on the fact that the compositions of Birdsall et al. are disclosed to have high mechanical strength and to impart increased commercial

applicability to the invention. As previously argued relative to past rejections, mechanical considerations would clearly play a cursory role in the decision by a person of skill in the art when choosing a composition with which to make a waveguide. The clear focus would be on resistance to intermixing and other properties of the composition that will affect optical properties of the waveguide. After all, if mere mechanical strength were enough to direct one of skill in the art to use a given composition for the waveguides of Amano et al., possible candidate materials for the waveguides would be endless. Further, the mere fact that the compositions of Birdsall et al. and Amano et al. are both drawn to the field of optical polysiloxane resin compositions also does not provide sufficient guidance to one of skill in the art that the compositions of Birdsall et al. possess the attending primary physical property considerations that are important for optical waveguides as set forth in Amano et al. Finally, the Applicants respectfully submit that it is entirely unclear how the compositions of Birdsall et al. could be viewed as imparting "commercial applicability" if chosen to replace the compositions of Amano et al.

In view of the foregoing, the Applicants respectfully submit that the amendments to independent claims 4 and 5 serve to overcome the rejections of these claims under 35 USC §103(a) over Birdsall et al. in view of Amano et al. Further, the Applicants respectfully submit that the Examiner cannot properly establish new rejections under 35 USC §103(a) of claims 4 and 5 as amended by relying upon the combined teachings of Birdsall et al. and Amano et al., alone or in combination with other references. As such, the Applicants

respectfully submit that independent claims 4 and 5, as well as the claims that depend therefrom, are in condition for allowance, which allowance is respectfully requested.

This Amendment is timely filed and it is believed that no fees are presently due. However, the Commissioner is authorized to charge Deposit Account No. 08-2789 for any fees or to credit the account for any overpayment.

Respectfully submitted,

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Dated: July 28, 2009

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